

Article: Beating the Odds

Leading Through Successful Digital Transformation



Why Do So Many Digital Transformation Initiatives Fail?

As manufacturing firms, we have approached digital transformation initiatives with more tools, technology, and know-how than ever before. Innovations in technology and processes range from industrial IoT (IIoT) location tracking to AI-powered preventative maintenance. Those advances improve product quality, reduce material waste, and reduce production line downtime with many of the expected productivity increases and cost decreases.

However, digital transformation initiatives often only result in incremental improvements when an organization isn't positioned to adapt to disruptive technology. To truly attain transformative change, manufacturers must recognize and directly address the organizational obstacles that may be hidden but can sidetrack even the most well-funded digital transformation initiative.

You likely recognize familiar challenges such as responding to evolving customer preferences, overcoming employee resistance, and breaking down silos within your organization. Yet digital immaturity, an organization's inability to adapt to disruptive technology, is a more recent shortcoming and a growing problem. Implementation of new technology across the enterprise is tricky business, particularly when manufacturers are relying on employees and technology partners to smoothly integrate old systems and workflows with new technology.

Merging new technology with legacy manufacturing equipment and workflows at scale directly affects established operational processes, products, and customer relationships as well. Failed transitions to modern manufacturing processes result in factory downtime and lost customers. Revenues are lost to more competitive firms. A Deloitte study found that *companies with higher digital maturity* were "about three times more likely than lower-maturity companies to report annual net revenue growth and net profit margins significantly above their industry average—a pattern that held true across industries."

Successful digital transformation initiatives in manufacturing operations increase productivity and improve safety and morale. But they require an organization with digital maturity to attain their full potential. Manufacturing leaders can position their companies to be more digitally savvy, beat the odds and be poised for success by following these fundamentals:

- Learn from setbacks of others
- Engage employees and your senior leaders
- Trust your team to avoid pitfalls and propel growth



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Learn From Setbacks of Others

Digital transformation in manufacturing is different from other industries. Interconnected supply chains leading to and from warehouses, and complex tracking of numerous assets and sensitive raw materials on the factory floor are just some of the unique challenges with implementing digital initiatives with established processes and legacy equipment.

In this unique manufacturing environment, digital transformation initiatives stall out for the following reasons:

- Evolving customer preferences can hinder efforts to understand and balance the needs of new and long-time customers
- Without employee acceptance and trust in technology partners, adopting technology can be tenuous
- Organizational silos hamper decision-making, leading teams to work against each other

Understand the True Driver of Business - Customers

Solving customer problems promptly turns negative incidents into building blocks of trust. Applying data analytics that reveal root causes of incidents serves as a foundation for aligning products with customer needs. Patterns revealed by AI and machine-learning uncover the customer perspective on the challenges they experience.

When leaders charged with process and change management have access to those insights, they better steer product development in a way that addresses those experiences. The result is stronger and more profitable relationships with customers.

Motivate Employees

Technology only works if people use it. To ensure that happens, incorporating employee feedback can catalyze widespread adoption. Start by tapping into your existing mechanisms for propagating company culture and introduce your digital transformation initiative with clear pathways to gather employee input. Going a step further, implement employee feedback technology to bring everybody into the change process in a way that increases employee adoption and ensures smoother deployment across the organization.

Don't Be a House Divided - Inform and Make Decisions Outside of Silos

Organizational silos introduce a classic obstacle to enterprise-wide changes, and even more so when it comes to the complexity of digital initiatives. Silos are rooted in departmental separation, functional roles, or seniority. Engineers, technicians, machine operators, process designers, and others have different insights into manufacturing processes. Participants in the Harvard Business School study "agreed that *digitally mature organizations are highly collaborative,*" where the chain of command doesn't block the chain of knowledge.

Next: Learn about overcoming obstacles to motivating employees.



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Engage Employees and Your Senior Leaders

The rapid pace of technological change can whipsaw even the most agile employees, and the specialization gap between experienced machine operators and high-tech data analysts hampers enterprise-wide buy-in. These realities slow or block large-scale initiatives that are necessary to staying competitive.

Recognize Employee Change Fatigue

A big reason for employee resistance to new processes and technologies is change fatigue. A Gartner study examined how different types of organizational change affect employees. They found that *changes to their daily workflow* and especially switching to a different manager or team have a greater negative impact on employees than larger-scale organizational changes.

Navigate and Balance Differences in Digital Maturity Within Your Organization

Marc Prensky described the difference between *digital native* students and digital immigrant teachers. Of course, the manufacturing environment relies on senior management to share their experience and knowledge with those digital native employees and colleagues born into the digital world. But if we are to learn anything from these labels, we can start by acknowledging our digital immigrant status and listening to our fellow digital natives. Collaborating with digitally savvy employees can guide your senior leadership on how to best transform your company.

A Harvard Business School analysis of feedback from over 1600 executives highlighted the importance of *recognizing different generational roles in the workforce*. "While not everyone needs to be able to code or understand the underlying dynamics of artificial intelligence (AI), participants say that almost all employees need a basic understanding and comfort of working with data." The broad consensus was "that what really matters is a leader's capacity to collaborate with and learn from digital specialists on their teams."

Communicate Purpose

Your company goes farther when employees and leadership are working toward the same goals. The HBS analysis suggests forming a common narrative to create a sense of shared purpose. Effectively communicating purpose prompts higher levels of trust and helps align decision-making. This doesn't imply that there can't be disagreements, and leadership still owns final decisions. But understanding the perspective of different roles can accelerate adoption - and unlock the full value - of new technologies.

Next: Learn more about building trust across a diverse team.



The specialization gap between experienced machine operators and high-tech data analysts hampers enterprise-wide buy-in.

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Trust Your Team to Avoid Pitfalls and Propel Growth

Foster a Culture of Human Feedback

The HBS analysis lists the *“challenger mindset and willingness to disrupt”* as a key quality of digitally mature organizations. For many, that mindset is part of their DNA. For those who are less comfortable with actively challenging the status quo and perceive disruptions as negative, incorporating employee input must be intentionally and continuously solicited to foster a culture that rewards forward thinking and adaptability.

A clear feedback path empowers all team members to provide context that is essential to improving manufacturing operations. Encouraging and automating employee input enables quicker adoption of critical change management initiatives and accelerates deployment of new technology platforms. As new technologies are combined with legacy manufacturing processes, the continuous journey of digital transformation begins to occur more naturally.

Find and Keep the Right People on the Inside

Manufacturing is full of people familiar with what it takes to run a factory the way they've always been run. For any kind of transformation, digital or otherwise, new and different skills are needed alongside the traditional expertise. Tool and integration expertise must be augmented by data science. Employees throughout the organization need to be able to interpret data and propose adjustments on the fly. Leaders are needed who can bring together knowledge and expertise from a wider variety of stakeholders and make room for creative problem-solving.

Inclusive leadership incorporates all levels of the manufacturing enterprise. Cross-functional teams that span the organizational hierarchy provide open access to decision makers. Giving a wider variety of employees a seat at the table engages teams to have a more vested interest in the company's success. A broader range of ideas and perspectives also introduces unexpected paths for growth.

At the end of the day, as important as digital expertise has become, more than 70 percent of the executives surveyed for the HBS study called out adaptability as *“the most important leadership quality”* - along with curiosity, creativity, and comfort with ambiguity

Find and Keep the Right People on the Outside

As you recruit and nourish your team to position your manufacturing operation for success in an increasingly digital business landscape, you also need to look for collaborative characteristics in your technology vendors. They should meet your IT security requirements, of course, but be sure they're also willing to serve in a consultative role so that your team can benefit from their expertise and outside perspective. That means they, too, need to be mindful of your longer-term purpose and strategy as they work as technology partners to build your factory of the future.



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How Can Digital Transformations Succeed?

“Digital transformation is more about people than technology.” While possibly counter-intuitive, this assertion from HBS is a conclusion drawn by others deep in digital. McKinsey & Company reports that *digital transformations fail* most often due to “lack of employee engagement, inadequate management support, poor or nonexistent cross-functional collaboration, and a lack of accountability.”

Engaging employees, senior leaders, and technology partners can prepare your business for evolving customer preferences and turn resistance into accelerated adoption of new processes. It turns out that clear pathways for gathering employee input can be a catalyst for scaling equipment and workflow changes throughout your organization.

When you learn from the familiar pitfalls and take a proactive stance in working through the human factor challenges, you are well-positioned to leverage new technology and truly optimize your operations for transformative growth.

About Thinaer

Thinaer’s patented AI as a Service platform links IoT-enabled sensors, ingesting millions of data points every second, and incorporates real-time human feedback, to reveal precise, predictive and actionable insights. Fortune 500 companies trust Thinaer solutions to deploy seamlessly while delivering improved productivity, reduced costs and rapid ROI. Learn more at thinaer.io or get in touch with us info@thinaer.io.



“Digital transformation is more about people than technology.”

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3 Best Practices to Become a Factory of the Future



Adopt Innovative Technology to Track and Analyze Every Aspect of Operations

Factories of the future, or smart factories, incorporate the industrial IoT (IIoT) that senses and connects everything from equipment to products to people. Modeling, machine learning, and AI use the vast amount of data collected to optimize manufacturing processes continuously.

For example, regular maintenance can prolong equipment life, but it can be expensive. The smart factory uses IIoT sensors that continuously check machine health and automatically schedules maintenance based on real-time conditions — leading to less downtime and greater cost savings.

Like the IIoT sensors that track physical and environmental data points, capturing human factors data directly from the people in your operation can optimize the entire manufacturing process. This prevents the common 'big data' issue of allowing raw data without context to drive strategy, which can frustrate your employees and erode your relationship with customers.

Even as 61 percent of executives in her Harvard Business School study believe “*data-informed decision-making*” is critical, Linda Hill and colleagues remind us of the importance of judgment. “Digitally mature companies have employees up and down the hierarchy who can look at data critically, knowing that some analyses will be incomplete, imperfect, or even biased.”

By fostering a culture where decisions are informed by data but infused with critical context, you empower and motivate employees, technology partners, and customers to feed the loop that leads to transformative optimization. In other words, your smart factory becomes a wise manufacturing operation.



Integrate Today's Technology Into Legacy Infrastructure

Another aspect of strategically leveraging technology is to make the most of legacy infrastructure. One of the transformative characteristics of implementing IIoT and cloud infrastructure is that they can be used to extend the life of older equipment while minimizing the risk of unexpected shutdowns.

This is a key area where connecting organizational silos can create a bridge from current operations to the factory of the future. Tech savvy employees and senior machine operators can work together to map a digital transformation strategy onto existing operations.



Enlist employees, technology partners, customers (rather than battle resistance)

At some point in our experience, we've all been challenged by employee resistance to change and new technology. We may have also encountered customer resistance, or disagreement with technology partners we rely on to help us build our business of tomorrow.

It's important to remember resistance to change is driven by a desire for stability. Bringing employees into the decision-making process through continuous, automated feedback ratchets up process efficiency without breaking it.

The pathway to building trust can be found through these same players, encouraging dialogue with key stakeholders and influencers across your organization. Assuming good intent and trusting their perspective leads them to higher engagement and buy-in to the vision and strategy for change.